DOCUMENT RESUME

CG 003 723

ED 028 467

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College Press and Dropouts.

American Educational Research Association, Washington, D.C.
Pub Date Mar 69
Note-44p.; Paper presented at the American Educational Research Association's 1969 Annual Meeting, Los Angeles, California, February 5-8, 1969.
EDRS Price MF-$0.25 HC-$2.30
Descriptors-College Choice, *College Environment, *College Students, Dropout Attitudes, *Dropout Characteristics, *Dropout Identification, *Dropout Research, Institutional Environment, Student College Relationship

Social-psychological data were gathered by questionnaires and the Omnibus Personality Inventory on two entering freshmen classes. A follow-up survey two years later, of students who had withdrawn, determined reasons for withdrawal and the nature of the problems these students experienced while still in attendance. Data suggested that salient environmental characteristics of the institution (large, liberal, affluent, secular, academically competitive, and cosmopolitan) were related to attrition, and the relationship differed according to sex. Male student drop-outs tended to be more religious or politically conservative. Female student drop-outs tended to be less esthetically inclined, to come from less wealthy homes, to consider themselves less attractive, and to have lower verbal aptitude scores. Both sexes, from smaller communities and with lower mathematical aptitudes, tended to drop out. Various university presses, then appear related to student behavior, with the same environmental press having different effects depending on the sex and social-psychological characteristics of the student. (KP)

ED028467

COLLEGE PRESS AND DROPOUTS

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From a paper presented at the American Educational Research Association's 1969 Annual Meeting, Los Angeles, Feb. 5 - 8, 1969, "Personality Characteristics, Environmental Presses, and Attrition from College." Your comments are welcomed.

Revision of
March 1969

003 783

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ABSTRACT

Extensive social-psychological data were gathered by questionnaires and the Omnibus Personality Inventory on two entering freshmen classes (N = 4150). Two years later the students who had withdrawn (N = 1131) from the University were contacted in a followup survey. The follow-up survey (80% response) determined why the students dropped out and sought to assess the nature of the problems they experienced while in attendance.

The social-psychological data on students who persisted were compared to the data on students who dropped out. A comparison of these data suggested that the salient environmental characteristics of the institution (large, liberal, affluent, secular, academically competitive, and cosmopolitan) were related to attrition, and that the relationship differed according to the sex of the student. Male students tended to drop out if they were more religious or politically conservative. Female students tended to drop out if they were less esthetically inclined, came from less wealthy homes, considered themselves less attractive, or had lower verbal aptitude test scores. Both males and females from smaller communities and those having lower mathematical aptitudes tended to drop out.

The findings suggest that various college and university presses are related to student behavior, and that the same environmental press may have different effects depending on the sex and the social-psychological characteristics of the student.

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Following the research in personality assessment by Stern, Stein, and Bloom (1956), studies have been undertaken to discover the relationships that exist between student performance and institutional characteristics. The more recent research at the college level has been done by Pace (1964), Stern (1962), Astin (1965), Thistlethwaite (1963), and Pervin, et.al. (1966), while at the secondary school level investigations are underway by Coleman et. al., (1966), Flanagan, et. al. (1962) and Bachman et. al. (1967).

Studies have demonstrated that the particular environment of a college does have some influence on dropout behavior. Pervin and Rubin, 1967, reported that discrepancies in perception between self and college were related to the likelihood of dropping out of college and to dissatisfaction with college. In the Stern, Stein, and Bloom (1956) study, at the University of Chicago, it was demonstrated that students with high needs for order would experience greater satisfaction, and thus perform well, in an orderly-structured environment, but they would experience frustration and anxiety in a disorderly environment and, thus, perform poorly. Astin has approached the issue of dropout with the model that he has utilized in his study of other college impacts, that is, a model which indicates what institutional characteristics add to the variance once the individual input variables have been systematically considered (Astin, 1964; Panos and Astin, 1968).

A number of other programs of research now under way have adopted a congruence model. Two examples of such research are the works of Pervin and Rubin (1967), and Keniston and Helmreich (1965). Pervin and Rubin have mainly been concerned with perceptual incongruence, relating probable drop-out for nonacademic reasons to the discrepancies between a student's perception of himself and his college, himself and other students, his college and the ideal college. Keniston and Helmreich, on the other hand, structure the problem around the identity issues that have been Keniston's concern in much of his research and writings.

A study of Nasatir (1963) characterized individuals and their dormitories according to their "academic" or "nonacademic" orientation. He reported that academic failure was greatest where there was a discongruence between the dominant orientation of the individual and that of his dormitory. Sucyek and Alfeit (1966) in interpreting the unexpected findings that dropouts (that is, dropouts "in good standing") were more mature, sophisticated and less narrowly conventional than the non-dropouts, suggested that these dropouts' maturity have made them dissatisfied and uncomfortable with what they perceived as the petty and restrictive demands of their environment at Berkeley.

The present study provides further evidence that salient environmental characteristics are related to student behavior. This research demonstrates that the major presses at a large midwestern state university are related to student dropout behavior. That is, because of a lack of "fit" between the needs,

interests and abilities of the student and the demands, rewards and constraints of this particular institutional setting, certain students dropped out. Furthermore, student dropout behavior was found to be sex-related.

METHOD

Extensive data were collected during pre-freshmen orientation on two complete classes (N = 4150) entering the undergraduate liberal arts college (classes of 1966 and 1967). These data consisted of written responses to a specially prepared questionnaire that was designed to investigate the impact of the college on individual students as an outcome of the characteristics of the college and of individual students. Two years later, additional data were collected by a follow-up survey from the students who had withdrawn from these entering classes. The purpose of the follow-up survey was to determine why the students dropped out and to assess the nature of the students' problems while in attendance.

Returns, after two follow-up letters, were received from 80% of the dropout sample (N = 1131). There were fewer returns proportionately from students who had obtained lower grade point averages; otherwise, the characteristics (age, sex, and selected psychological dimensions) of the respondents and non-respondents were alike. Since there seemed to be no response bias, the non-respondents were not considered to be a source of invalidity in the analysis.

The Environment

The salient characteristics of the campus environment were largely determined by comparing the profile data on the University collected by Astin, Pace, Stern, and Thistlethwaite. For example, in a study in 1965 utilizing CUES[1], the university was rated high on scales of awareness (96th percentile) and scholarship (92nd percentile). The items in the awareness scale in the words of the manual (1963) reflect a concern and emphasis on three sorts of meaning---"personal, poetic and political... the search for personal meaning...concern about events around the world... search for political meaning and idealistic commitment...an awareness of aesthetic stimuli." The items of the scholarship scale "describe an academic, scholarly environment...intellectual speculation and interest in ideas as ideas, knowledge for its own sake and intellectual discipline--- all these are characteristic of the environment." In addition, other information suggested relatively unique presses. For example, a large proportion of the undergraduate student body is from out-of-state (25 - 30% of each entering freshman class) and from abroad (4 - 5% of the student body). Among the out-of-state group, many are from the northeast, particularly New York City. These data, for example, suggested a cosmopolitan atmosphere. The considerable campus activity for civil rights and against the war in Vietnam combined with teach-ins, the Free University, and the activities of organizations such as the Students for a Democratic Society (SDS)[2] and Student Non-violence Coordinating Committee (SNCC) suggest a "liberal" cast to the population of both students and faculty.

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1 College and University Environment Scales: A Preliminary Technical Manual, published by Educational Testing Service, Princeton, New Jersey, 1963.

2 The Students for a Democratic Society was initially organized on this campus.

Certain distinguishing factors about the institution tended to emerge consistently among these data and observations. Aside from being among the larger universities, the salient environmental presses appeared to be (1) intellectual: an academic emphasis on the abstract and theoretical; (2) reflective: active inquiry about value systems and ethics; (3) academically competitive: a substantial emphasis on scholarship; (4) esthetic: interest in the fine and performing arts; (5) politically liberal: an activist orientation among a substantial number of faculty and students; (6) cosmopolitan: the student body and faculty come from diverse geographic origins, largely urban; and (7) permissive: low faculty press for compliance, large numbers of students off campus living in apartments and fraternities, little social or academic conformity expected among students, and the large, presumably impersonal, classes for underclassmen.

These presses served as guides to the counterpart social and personality dimensions that were examined. For instance, the politically liberal press suggested an examination of conservative-liberal personality orientations; likewise, since this is a secular institution, stressing reflective thought, dimensions of religion were examined.

Thus, items were sought that on an a priori basis were alike, i.e., seem to be measuring the same thing. The analysis is on an a posteriori basis, i.e., by making comparisons between the dropouts and stayins on the basis of independent variables one suggests from the effect the cause. Thus, characteristics that were found to be more common among dropouts were suggestive

of personality characteristics that are not congruent with the environmental press.

FINDINGS

The responses of males and females are shown separately, since the variables were found to be related in sex-related patterns.

Politically Liberal Press

The campus climate has "liberal" or "new left" overtones. The related social and personality dimensions are voting behavior, party choice and attitudes toward public issues.

Table 1 about here

Illustrated in Table 1 are the relationships between preferences for a candidate in a national election, specific parties, a general political orientation, and the likelihood that he would later be a dropout.

Those male students who would have voted for the Republican candidate in the Presidential campaign were more likely to be among the dropouts when the follow-up study was initiated. Among male dropouts 36.1% would have voted for the Republican candidate, whereas among the stayins 22.6% would have voted for this candidate. Among the female sample almost equal proportions of dropouts and stayins selected the Republican candidate: 23.8% of the dropouts compared to 22.9% of the stayins.

The same relationship is illustrated where the student is asked to indicate his general preference for a political party. Here it will be noted that among male dropouts 43.2% selected the Republican Party, whereas among male stayins 36.7% considered themselves to be Republicans. Among the female sample there is virtually no difference in the way they responded to the question and the likelihood of becoming a dropout.

The same relationship is again illustrated when the student was asked to describe himself in terms of political orientation on a bipolar scale of self-descriptive adjectives. Again, the male dropouts tend to think of themselves as politically conservative; a higher percentage of the male dropouts described themselves on the politically conservative side of the scale than did the stayin.

As in previous examples the female responses tended not to differentiate consistently between the dropout and stayin. There is, interestingly, a suggestion among the female responses for an opposite tendency, i.e., more tendency for liberal responses among the female dropouts. There is also the suggestion of a curvilinear relationship; both the "extremely conservative" and the "extremely liberal" female responses tended to be found among the dropouts.

Thus, males and females differed systematically on all the items. Males who perceived themselves as politically conservative were more likely to be among dropouts. Among females political orientation was unrelated to dropout behavior.

Religion: Strength of Faith and Preference

Male students professing a stronger religious orientation showed a greater likelihood of dropping out. The same relationship,as in the political orientations,did not appear for the female student.

Males who responded as having attended religious services (Table 2) "once a week or more" are substantially more likely to be among the dropouts (40.6%) than among the stayins (26.9%), whereas those male students responding as attending "a few times a year" are substantially more likely to be among the stayins (30.9%) than the dropouts (12.5%). In contrast, among the females there is virtually no difference between dropouts and stayins regarding the frequency of attending religious services. The implied relationship that a stronger religious faith is related to the frequency of

Table 2 about here

attendance at religious services is examined more closely later when we look at religious preferences among the students.

A second measure of the strength of religious faith is presented by responses to a bipolar set of descriptive adjectives which ask the person to describe himself on a religious-agnostic scale. Males responding "quite closely" and "extremely religious" are more likely to be seen among the dropouts (39.5%) than among the stayins (34.6%).

A final example of the religious orientation of the male dropout is suggested by his response to the question about the importance of different areas of life after college. These data indicate responses on a four-point intensity scale of importance from "little or no" to "crucially." Among the dropouts a larger proportion feel that religious beliefs or activities are "very" and "crucially important" (44.3%), compared to stayins (36.4%). Again, among females the differences are not as great and are not as consistent as in the male sample.

While the overall differences between dropouts and stayins for the males are not great, the consistency of results among the items that measure religious orientation is substantial.

Table 3 about here

To examine this question further it may be helpful to examine the religious faiths as proportionately represented in the entering student population. Table 3 contrasts dropouts and stayins on the basis of religious preference. There are a number of striking differences among religious preferences for men. The most striking difference appears to be in the dropout and stayin percentage for males with a Jewish religious preference, i.e., 8.9% among the dropouts are Jewish in contrast to 26.9% of the stayins. Among the Catholic males there is a larger proportion among the dropouts (21.8%) than among the stayins (14.8%). And finally, even among the male

students professing a preference for one of the Protestant faiths we find a somewhat larger percentage of them among the dropouts (43.6%) compared to the stayins (37.8%).

The data for the female sample suggest the same tendency, i.e., higher dropout rates among Catholics and Protestants and a lower dropout rate for Jewish; however, the differences in rates between dropouts and stayins for the females by religious preference are clearly not nearly as great as those seen in the male sample. On the whole, the data for the female sample like the data in all previous tables indicate little if any relationship with dropping out or staying in. What might explain these differences?

A possibility is that the environmental presses are perceived or compensated for differently depending upon the sex of the student. For example, among females it seems that strong religious convictions are more likely to be expected, whereas among males a strong religious conviction tends to be considered in a different way. The female with strong religious convictions is more likely to be respected for her views than a male who, at least among males, may be chided.

At this stage of development it seems that students may primarily be concerned with what they appear to be in the eyes of others, as compared with what they feel they are. Therefore, the more religious male may, in a secular environment that stresses self inquiry and awareness, feel more out of place than the female.

Also, there were indications in Table 3 that Protestant males tend to be among the dropouts. This would be contrary to expectations if we consider the presumed success orientation of Protestants as suggested by Max Weber. The observed relationship may be spurious, because it was also found that students of both sexes from rural areas and smaller towns and cities are likely to be among the dropouts. And the data in Table 4 indicate that Protestants are more (contrasted to Catholics and Jews) likely to

Table 4 about here

live in rural communities.

Insofar as the students attending the University are admitted from communities that are approximately representative of those in the United States it suggests that a larger proportion of the Protestant student body would come from smaller communities. Thus, when we note a larger proportion of the Protestant males among the dropouts than among the stayins the size of the community where the student was reared may have been the dominating influence. Therefore, in some instances the more crucial variable may not be religion but rather place of residence.

Likewise, the staying power among Jewish students may be related to both the fact that they usually are from the urban settings (larger environments) and also to the values (McClelland 1958; Panos and Astin 1967) placed on education among the Jewish.

Size as a Press

The University is among the largest of such institutions in the country. Thus, it was anticipated that students of both sexes from the smaller communities would be over represented among withdrawals from the University. The relationship between the place where the student lived most of his life and dropping out is presented in Table 5.

These indicate that both males and females who lived most of their lives in communities of less than 50,000 population are more likely to be among the dropouts. A "breaking point" is reached at community populations of about 50,000, i.e., below 50,000 for both sexes the dropout percentages are higher than the stayin percentages.

The breaking point figure of 50,000 is suggested again by these data on students reporting a home address in Midwestern State's cities of 50,000 or more. They are not significantly more likely to be among the dropouts. Students, on the other hand, who reported addresses in communities "Anywhere else" in Midwestern State (the smaller of the State's cities, towns, and rural communities) are much more likely to be dropouts.

While the first two questions in Table 5 indicate something about the size of the residential community, the third question indicates something about the size of the previous academic community (high school). Again, there is a positive relationship between smaller size and dropping out. Here the breaking point seems to be in high schools with graduating classes between

200 and 400 students. The greatest percentage differences are in marked favor of students coming from schools with graduating classes in excess of 600 students, i.e., there are substantially more students from high schools with the largest graduating classes among the stayins (males, 21.2%; females, 24.5%) as contrasted to the dropouts (males, 12.9%; females, 14.9%).

Table 5 about here

For males, these data suggest that those with strong religious convictions, those with conservative political orientations and those from smaller communities tend to be among the dropouts. Among females only those from the smaller communities are seen to be over represented among the dropouts.

Social and Esthetic Presses

Generally, those females who seem to be less esthetically inclined were more likely to drop out. Illustrated in Table 6 are responses to questions regarding what the students did in their leisure time and how they responded to questions dealing with esthetic matters.

Comparing the proportion of male stayins and dropouts in any category tends not to indic te any large or consistent differences; however, among females the stayins are consistently more likely to have participated in and were more likely to enjoy esthetic activities than the dropouts. These data

suggest that the social presses effect men and women students differently, but in expected ways. Female responses, for example, to the question about

Table 6 about here

the importance of different areas of life indicate that the least cultured female was over represented among the dropouts. At the level of "little or no important" there is hardly any differentiation among the males (27.3% vs. 25.2%) yet among females there is a substantial difference (17.1% of the dropouts vs. 9.6% of the stayins).

Another factor suggesting that the social environment may affect the female differently than the male is seen by an examination of the family incomes as reported by these students. All students giving financial hardship as a reason for dropping out were removed from the sample before this comparison was made. Table 7 presents a distribution of responses among six categories of income. For the male, the differences in percentage distributions between the dropouts and stayins are generally not large except at the $4,000-$7,499 category where a larger percentage (19.9%) of the dropouts reported their family income, and at the $20,000 or more category, where 23.2% of the stayins as contrasted to 17.7% of the dropouts reported their family income. These figures tend to suggest a positive relationship between higher income and staying in for males; however, the relationship is not consistent throughout the categories.

Table 7 about here

For contrast, these data for the female sample indicate that in the lower three categories (income under $10,000) among the dropouts we find 35.6% while among the stayins 25.0%. In the higher three categories (income of $10,000 or more) among the dropouts are 56.5% of the cases; whereas, among the stayins we find 69.6%. The differences between dropouts and stayins are greater as the highest income category is approached.

It would appear from these data, at least for females, that there is a positive relationship between family income and staying in. Since the same strong relationship does not appear in the male samples, it seems as though females coming from less wealthy homes may, among youth from relatively wealthy families, find themselves more "out of place" than males.

Academic Presses

This section deals with matters that are more closely related to the academic presses: measured academic ability and personality orientations as measured by the Omnibus Personality Inventory (OPI). These measures are related to cognitive processes that differ among people and to some extent determine what use they will be able to make of their intelligence.

Despite the fact that the University maintains a highly selective admissions policy the range of scores on the college Entrance Examination Board's Scholastic Aptitude Tests-Verbal (SAT-V) and Mathematics (SAT-M) are nevertheless substantial. The verbal score in liberal arts colleges has been found to be more closely associated with academic achievement than the score in mathematics, which has been a better academic predictor

variable in fields such as engineering (Travers, 1949; Lavin, 1965).

Indicated by these data are substantially smaller differences in SAT scores between male dropouts and stayins than between the female samples. For both males and females the student with the greater academic promise (higher SAT score) is likely to be among the stayins. What is of particular interest, however, are the greater differences between the dropouts and stayin females than between the males.

It seems that these greater differences among females confirm what may be observed among students as they might be observed while comparing grades. Among girls it seems that earning a lower grade relative to other girls is more crucial, e.g., "Poor Mary." Whereas among men, a lower GPA (or specific grade) is more a, "Ha, Ha, look where I am" situation. Therefore, suggesting academic deficiencies would appear to be more difficult for the female to handle.

These data also suggest that among females verbal aptitude, as measured by the Scholastic Aptitude Test, is more crucial than it is for the males. This sex difference was not anticipated; however, it does seem to make a certain amount of sense. That is, among females there may be a greater reliance on verbal skills.

Table 8 about here

Table 9 about here

Omnibus Personality Inventory

The Omnibus Personality Inventory (OPI), a test developed at the Center for Research and Development in Higher Education at Berkeley, was developed to assess personality characteristics among normal and intellectually superior college students. The OPI has a variety of scales that can be used in varying combinations (Wallen, 1965).

Most of the names used for the scales appear to be fairly objective descriptions of psychological variables. The Religious Liberalism scale indicates how "liberal" a person is in his ideological commitments, i.e., how skeptical a person may be of conventional, orthodox religious beliefs and practices.

The OPI scales seem particularly well suited to an analysis of the intellectual demands of the college, i.e., they appear to measure dimensions appropriate to a liberal arts curriculum, e.g., philosophy, virtue, dramatics, abstract thought, and so on. Thus, one would expect these dimensions to distinguish between those students who presumably had their needs met (stayins) and those who may have had interests that tended not to be congruent with a liberal arts orientation (dropouts).

The categories of response are collapsed into low, medium, and high categories. This style of presentation (low, medium, high) appears to be favored at the nenter for the Study of Higher ducation at Berkeley, since Hessel (ca. 1964) and Tilley (1964) and Trent, et. al. (1965) favored this

approach. The low range corresponds with approximately the lowest 1/3 of any scale, the medium range with the middle third of the scale and the high, the top 1/3 of the scale.

The RL (Religious Liberalism) scores support the findings reported earlier, i.e., higher scoring males (more liberal in their views) tend to be found among the stayins (26.8%) rather than the dropouts (18.6%). Among the females, the RL scores indicate virtually no difference.

The ES (Estheticism) scores support our earlier observations as well, i.e., no difference among the males but among the females those with lower scores (less interest in esthetic matters) are more likely to be found among the dropouts (16.2%) than the stayins (9.8%).

The CO (Complexity) scores do not appear to differentiate between dropouts and stayins for either sex. The IE (Impulse Expression) scale suggests a slight relationship (not significant) between a low score and the greater likelihood of being among the stayins for both sexes.

The SM (Social Maturity) scales for males and females are similar, suggesting that students with higher scores are more likely to be among the stayins. This is an interesting scale to examine more closely. While most of the scales appear to be fairly objective descriptions of psychological variables the SM scales may actually be measuring something that might have a different title. The following are some SM items:

1. Society puts too much restraint on the individual. (T)
2. Unquestioning obedience is not a virtue. (T)
3. Parents are much too easy on their children nowadays. (F)
4. I am in favor of strict enforcement of all laws, no matter what the consequences. (F)
5. Only a fool would try to change our American way of life. (F)
6. Divorce is often justified. (T)

It would appear that the items may be measuring characteristics of nonauthoritarianism, skepticism and perhaps rebellion. There may be some value judgment in calling these characteristics "social maturity"--depending on one's point of view. In any case, high scorers for both sexes are likely to be stayins.

The TO (Theoretical Orientation) scales do not seem to differentiate clearly between the samples; however, among females there is a suggestion that the low TO females are more likely to be among the dropouts (20.7%) than the stayins (14.6%).

The TI (Thinking Introversion) scale, like the TO scale, does not clearly indicate differences for either sex, except that slightly higher scoring TI females are more likely to be among the stayins.

Three of these OPI scales seem to have a close relevance to cognitive styles. (By cognitive styles one is referring to mental processes by which people tend to approach knowledge or organize their thinking). The three scales in the OPI are:

Complexity (CO) - measuring critical-independent thinking, intellectualism, estheticism, and tolerance for ambiguity. (Sanford and Yonge, 1960, pp. 18-24)

Theoretical Orientation (TO) - measuring an interest in scientific activities, including a preference for using the scientific method in thinking.

Thinking Introversion (TI) - measuring liking for reflective-abstract thought.

Since the environment in the College (liberal arts) would seem to emphasize the use of these styles of thinking, one would expect the scales to differentiate between our samples. The differentiation would be expected to be similar for the males and females since the academic demands (as contrasted to the social demands) on each sex should be about the same.

The evidence from these OPI scales (CO, TO and TI) would not seem to support clearly this presumption, i.e., the differences between the stayins and dropouts on these scales are not large and in cases where differences are noted they are not the same for the males and females. Since this is the case the investigator does not feel that the OPI scores clearly indicate differences between the samples in the area of cognitive styles. The OPI scales did, however, support earlier observations, e.g., religiously conservative males tend to drop out; also, less esthetically inclined females tend to drop out. And the SM scale indicates that the student who tends to be non-authoritarian and skeptical (perhaps rebellious) tends to stay in. These last three variables seem to be related to the

environmental presses, e.g., secular, esthetic, permissive.

SUMMARY AND IMPLICATIONS

Selected student characteristics were examined to determine whether or not they appeared to mesh with the related environmental presses. In order that the relevant student characteristics be focused upon out of the larger body of data, it was first necessary to identify the institution's presses.

The investigation was also concerned with analyzing the data in relation to a stage of human development. It was suggested that during this stage the developmental tasks of men and women were different; therefore, resulting in different behavior relative to the environmental presses. It is suggested that the environmental presses might broadly be considered in relation to two dimensions: social and academic.

The findings are easily summarized. Figure 1 illustrates the salient social presses and academic presses of the insitution.

Social Press

Male and female students were shown to vary considerably in their dropout or stayin behavior relative to most of the social presses. Students of both sexes from the smaller communities appeared to have difficulties at the University. Otherwise, politically liberal males, and those with strong religious beliefs, were found to drop out. Among females it was noted that

the less wealthy, less esthetically inclined and less attractive were more often found among the dropouts.

This pattern seems to make social-psychological sense in view of the process of socialization that tends to differentiate men and women in our society. Men and women play different roles.

The male is more likely, for example, to be actively concerned with the political processes. Thus, the conservative male in a liberal setting is inclined to be confronted by beliefs that run contrary to his own central values and goals. These confrontations probably effect his inner sense of coherence and competence and are thus to some degree unsettling. In like fashion, it is not surprising, then, to find that females who appear to be less cultured (music, art, poetry) and less attractive in a cultured and socially competitive environment are inclined to withdraw. To be esthetically inclined and physically attractive are female roles.

Students of both sexes were more likely to be among the dropouts if they came from smaller communities. It would appear that the largeness of the environment effects them equally. What is not clear about this relationship is what other values these students from the smaller communities may tend to have in common.

Regarding the social presses these data suggest that where the University tends to have relatively unique presses the corresponding social-psychological

attributes of students differentiate between stayins and dropouts. These same presses tend to differentiate between males and females in ways that appear to reflect anticipated variances in role expectations that my be in turn related to the socialization process.

Academic Press

The academic presses were also shown to differentiate between stayins and dropouts (see Figure 1). In this case, however, it was not anticipated that male and female roles would be related to the academic presses since the intellectual (course related) demands are probably similar for each sex.

The scores of the Verbal and Mathematics sections of the Scholastic Aptitude Test did differentiate between stayins and dropouts; higher scoring students tended to persist as expected. The notable feature seemed to be the greater SAT-V score difference between female dropouts and stayins.

At least two of the OPI scales (RL and ES) seem to measure what have been broadly defined as social presses. Both of these scales supported the results discussed earlier, i.e., more religious males and less esthetically inclined females tended to withdraw. Of the remaining scales (Figure 1) three seem to be more closely related intellectual orientations: Complexity (CO), Theoretical Orientation (TO) and Thinking Introversion (TI).

Since the University's liberal arts college was characterized as an institution that encourages complex theoretical and reflective thought, it was anticipated that low scores on the CO, TO and TI scales would be

indicative of students who did not have the best intellectual orientation for the College. The scales, however, did not clearly differentiate between dropouts and stayins. There was no difference at all in the CO scale and the minor differences in the female sample on the TO and TI scales are felt to be relatively inconsequential. Thus, it is concluded that the students' cognitive styles (intellectual orientations), at least as measured by the OPI, do not suggest incongruence with the academic presses.

In summary. There was support in these data concerning the notion about the possible effect of institutional presses. Also demonstrated was the sex-differentiated significance of these presses. The sex-differentiated results suggest that certain aspects of the interaction with the environment are more or less crucial depending upon one's sex.

These data also supported the presumption that the presses were of two broad categories (social and academic) and that students might be incongruent with either or both of these major environmental presses. Not clearly supported by these results is the notion that certain cognitive styles are significant in a student's intellectual adaptation to academic presses.

Figure 1 Summary of the findings

Press	Effect on Students? Male	Female	Effect
Social			
Largeness-size	Yes	Yes	Males and females from smaller communities tended to drop out.
Liberal	Yes	No	Males tended to drop out if conservative.
Esthetic-cultured	No	Yes	Females who were less esthetically or culturally inclined dropped out.
Secular-introspective	Yes	No	Males with stronger religious feelings tended to drop out.
Wealth	?	Yes	Females from less wealthy homes dropped out.
Academic			
Scholastic ability			Males and females with lower SAT scores were both more likely to be among the dropouts. This was found to be truer among lower scoring females on the test of verbal ability.
SAT-V	?	Yes	
SAT-M	Yes	Yes	
Omnibus Personality Inventory			
(RL) Religious Liberalism	Yes	No	The RL and ES scales support the finding reported as part of the social environment.
(ES) Estheticism	No	Yes	Less esthetically inclined females were more likely to be among the dropouts.
(CO) Complexity	No	No	No differences.
(IE) Impulse Expression	?	?	No clear difference.
(SM) Social Maturity	Yes	Yes	High SM scores are associated with stayins.
(TO) Theoretical Orientation	No	?	The TO and TI scores do not differentiate the males. However, there is a slight suggestion that among females low TO and low TI scores are more crucial.
(TI) Thinking Introversion	No	?	

Implications and Some Observations

It is obvious that the interpretation of the empirical findings in this study must be regarded as highly tentative. They generally support the notions that guided the investigation. But it is also obvious that many sources of variation--peers, family and other personality dimensions--have not been studied. The attempt throughout has been to interpret as reasonably as possible whatever facts were available not because the facts are especially secure, but because such interpretations may serve as a source of future research hypotheses.

A major hypothesis that must be entertained is that"press" as well as "non-press" (e.g., personality) factors may have accounted for the differences noted in this study. Since the present data do not permit us to rule out one or the other of these two broad explanations (the environmental vs. the individual differences) it may be tentatively concluded that both are plausible, and not mutually exclusive, explanations of the results.

Though both explanations are consistent with the results, they differ with respect to their implications for college administrators and faculty. An interpretation in terms of environmental effects may suggest steps which colleges can take to lessen the effect of environmental presses, e.g., counseling staffs can be made aware of major press related problems among the student body, curricular and residential reorganization are situational factors that might be modified. On the other hand, efforts can be made to better pair student and institution when we know more about both.

The most direct implication of these findings concern person-environment interaction. As educators and researchers we have to be attuned to the fact that the same college or university environment can have very different effects on different students.

So complicated, however, are the problems of research, admission, guidance and so on that we will not be able to solve for a long time to come the prediction of optimal individual development. In the meantime many students will make false starts and find it necessary to change directions. Therefore, any system of higher education to perform adequately must remain reasonably diversified, open and flexible while "the human creature remains complex, whimsical and often--happily--defiant of classification."[1]

[1]Goldsen, et. al., 1960, p. xxviii

TABLES

* p $<$.10
** p $<$.05
*** p $<$.01
**** p $<$.001

TABLE 1

POLITICAL ORIENTATION

		Democratic Candidate %	Republican Candidate %	Don't Know %	
Question: If the last Presidential election were being held today with the same candidates, which would you favor?					df = 2
Male:	Dropout (260)	53.8	36.1	10.0	$x^2 = 12.792^{***}$
	Stayin (331)	64.9	22.6	11.7	
Female:	Dropout (306)	66.0	23.8	10.1	$x^2 = .864$
	Stayin (375)	62.4	22.9	14.6	

		Democratic %	Republican %	Socialist %	Independent %	Don't Know %	
Question: Regardless of immediate issues, how do you usually think of yourself, as a Republican, or Democrat, or what?							df = 3
Male:	Dropout (271)	23.2	43.2	.7	27.3	5.5	$x^2 = 6.774^{*}$
	Stayin (349)	29.5	36.7	2.6	26.9	3.7	
Female:	Dropout (315)	37.5	33.3	.3	26.0	2.9	$x^2 = 3.076$
	Stayin (369)	35.3	35.1	1.0	26.3	2.3	

		Politically Conservative				Politically Liberal			
		Extremely %	Quite Closely %	Slightly %	Equally Relevant %	Slightly %	Quite Closely %	Extremely %	
Question: How would you describe yourself as a person?									df = 6
Male:	Dropout (369)	8.5	12.9	11.8	22.9	11.1	18.8	13.3	$x^2 = 2.969$
	Stayin (347)	7.4	10.9	10.9	20.3	11.7	21.8	16.3	
Female:	Dropout (312)	6.0	9.2	8.9	19.7	17.1	21.6	16.5	$x^2 = 8.796$
	Stayin (387)	4.8	13.1	12.6	20.2	14.9	20.5	11.6	

* p $<$ .10
*** p $<$ .01

TABLE 2

RELIGIOUS ORIENTATION

Question: How often do you attend religious services?		Once a Week or More %	Two or Three Times a Month %	Once a Month %	A Few Times a Year %	Rarely Over the Years %	Never %	df = 5
Male:	Dropout (271)	40.6	21.8	8.9	12.5	7.7	5.2	x^2 = 33.151****
	Stayin (349)	26.9	19.2	10.3	30.9	8.0	3.4	
Female:	Dropout (315)	40.6	14.6	8.6	24.1	5.7	4.8	x^2 = 2.797
	Stayin (369)	41.2	17.4	7.3	24.0	6.6	3.0	

Question: How would you describe yourself as a person?		Religious				Agnostic			df = 6
		Extremely %	Quite Closely %	Slightly %	Equally Relevant %	Slightly %	Quite Closely %	Extremely %	
Male:	Dropout (271)	14.0	25.5	21.0	11.4	7.4	10.0	9.6	x^2 = 5.333
	Stayin (349)	9.7	24.9	23.2	10.0	10.0	8.9	11.7	
Female:	Dropout (315)	18.1	36.2	17.8	6.0	6.3	6.0	8.9	x^2 = 3.969
	Stayin (369)	21.0	31.1	20.7	5.1	4.8	6.1	9.3	

Question: When you think of your life after college, how important do you expect each of the following areas will be to you?		Religious beliefs or activities				df = 3
		Little or No Importance %	Important %	Very Important %	Crucially Important %	
Male:	Dropout (271)	17.7	37.6	30.3	14.0	x^2 = 4.040
	Stayin (349)	20.9	42.4	24.9	11.5	
Female:	Dropout (315)	16.2	36.2	33.7	13.3	x^2 = 2.521
	Stayin (396)	13.1	39.6	30.8	15.2	

TABLE 3 - RELIGIOUS PREFERENCES OF THE DROPOUTS AND STAYINS

	Male		Female	
	Dropout	Stayin	Dropout	Stayin
Protestant	43.6%	37.8%	48.0%	47.7%
Catholic	21.8	14.6	17.5	15.9
Jewish	8.9	26.9	20.0	24.7
Orthodox	.4	.3	1.6	--
Other and no preference	25.5	20.4	12.9	11.6
Number	(271)	(349)	(315)	(396)
df = 2*	$x^2 = 20.861^{****}$		$x^2 = 1.980$	
	$p = < .001$		p = N/S	

* Protestant, Catholic, and Jewish preferences only

TABLE 4 - RELIGIOUS PREFERENCE AND RESIDENCE BY SIZE OF COMMUNITY IN THE UNITED STATES[1]

Religious Preference	Urban area of 250,000 Population or more	Urban area of less than 25,000 population	Rural	Total	N (Thousands)
Protestant	27.2%	29.5	43.4	100%	78,952
Roman Catholic	53.9%	24.9	21.2	100%	30,669
Jewish	87.4%	8.7	3.9	100%	3,868

[1] Source: Statistical Abstract of the United States. Washington U. S. Department of Commerce, 1962, p. 40.

TABLE 5

COMMUNITY SIZE

Question:	Which of the following places best describes the place where you lived most of your life?	Farm or in a village (2,500 or less) %	Town 2,500 to 9,999 %	Small city 10,000 to 49,000 %	Med. city 50,000 to 200,000 %	Metropolitan city 200,000 and over %	Suburb of metropolitan city %	df = 5
Male:	Dropout (271)	12.5	10.7	19.6	15.9	17.3	21.0	$x^2 = 20.759^{****}$
	Stayin (349)	7.2	5.7	14.9	17.5	28.4	25.5	
Female:	Dropout (315)	10.5	10.8	16.2	14.6	22.2	24.1	$x^2 = 13.301^{**}$
	Stayin (396)	4.8	7.8	15.4	20.2	25.0	25.5	

Midwestern State

Question:	Where is your home address now?	Metro-politan area %	Cities of 50,000+ %	Anywhere else %	New York City %	Northern-eastern states %	North central states %	South-ern states	Western states %	Non U. S. A. %	df = 7
Male:	Dropout (271)	28.4	13.3	32.8	1.8	5.9	10.7	2.6	---	3.7	$x^2 = 29.246^{****}$
	Stayin (349)	33.2	12.6	18.3	5.4	4.9	16.9	3.4	.6	1.7	
Female:	Dropout (315)	36.5	12.1	29.2	2.5	4.4	9.2	2.9	1.3	1.3	$x^2 = 30.251^{****}$
	Stayin (396)	32.6	12.4	19.9	3.8	5.8	17.4	2.5	---	1.5	

Question:	About how many students were there in your high school graduating class?	49 or less %	50-99 %	100-149 %	150-199 %	200-399 %	400-599 %	600 or more %	Not ascer-tained %	df = 6
Male:	Dropout (271)	5.9	17.0	11.8	7.7	26.6	15.5	12.9	2.6	$x^2 = 20.931^{***}$
	Stayin (349)	4.6	10.3	7.4	5.2	27.5	23.2	21.2	.6	
Female:	Dropout (315)	7.0	14.3	8.3	9.8	28.9	15.6	14.9	1.3	$x^2 = 20.786^{***}$
	Stayin (396)	4.3	8.1	9.3	8.1	24.7	20.5	24.5	.5	

TABLE 6

ESTHETIC ORIENTATION

Question: For each of the activities listed indicate whether you have done it, and how much you enjoyed it.		READING POETRY — Have Done This:					LISTENING TO SERIOUS OR CLASSICAL MUSIC — Have Done This:				
		Enjoyed it very much %	Enjoyed it moderately %	Did not enjoy it very much %	Have rarely done this %	df = 3	Enjoyed it very much %	Enjoyed it moderately %	Did not enjoy it very much %	Have rarely done this %	df = 3
Male:	Dropout (271)	12.5	33.9	31.4	19.2	x^2	34.3	24.7	17.0	12.9	x^2
	Stayin (349)	12.6	33.8	33.2	14.9	1.734	35.2	28.9	18.9	14.0	2.046
Female:	Dropout (315)	28.9	37.1	20.6	10.5	x^2	42.2	36.5	9.8	9.8	x^2
	Stayin (396)	37.9	34.3	14.9	9.3	8.093**	50.5	28.5	10.6	7.6	7.162*

Question: How would you describe yourself as a person?		Artistic			Equally Relevant %	Inartistic			df = 6
		Extremely %	Closely %	Slightly %		Slightly %	Quite Closely %	Extremely %	
Male:	Dropout (271)	6.3	15.5	17.3	8.9	17.3	17.3	16.6	x^2 = 3.727
	Stayin (349)	5.7	16.0	18.6	8.6	12.6	17.5	20.3	
Female:	Dropout (315)	11.4	22.5	18.1	6.0	10.5	13.0	17.8	x^2 = 10.932*
	Stayin (396)	11.9	20.7	25.3	4.0	11.1	13.6	11.4	

TABLE 6
(Continued)
ESTHETIC ORIENTATION

Question: When you think of your life after college, how important do you expect each of the following areas will be to you?		The world of art and music, the aesthetic life				
		Little or No Importance %	Important %	Very Important %	Crucially Important %	df = 3
Male:	Dropout (271)	27.3	45.8	19.6	7.0	x^2 = 5.725
	Stayin (349)	25.2	46.1	24.4	3.4	
Female:	Dropout (315)	17.1	49.8	25.7	7.0	x^2 = 8.733**
	Stayin (396)	9.6	52.5	25.5	8.1	

Question: How would you describe yourself as a person?		Handsome			Equally Relevant %	Plain			df = 6
		Extremely %	Quite Closely %	Slightly %		Slightly %	Quite Closely %	Extremely %	
Male:	Dropout (271)	4.1	30.3	34.3	14.8	9.2	5.9	1.1	x^2 = 1.978
	Stayin (349)	4.9	29.2	36.4	11.5	10.0	6.0	1.4	
Female:	Dropout (315)	2.2	20.9	27.6	14.3	18.4	13.3	2.9	x^2 = 19.386***
	Stayin (396)	2.5	31.3	30.1	11.1	11.6	8.8	2.3	

TABLE 7

FAMILY INCOME

Question: About how much total income do your parents earn yearly at the present time?		Less than 3,999 %	4,000 - 7,499 %	7,500 - 9,999 %	10,000 - 14,499 %	15,000 - 19,999 %	20,000 or more	df = 5
Male:	Dropout (271)	2.6	19.9	16.6	24.0	15.5	17.7	x^2 = 7.546
	Stayin (349)	2.6	13.5	15.5	28.7	14.6	23.2	
Female:	Dropout (315)	3.2	16.5	15.9	27.9	14.3	14.3	x^2 = 16.037***
	Stayin (396)	1.0	11.9	12.1	29.0	19.4	21.2	

TABLE 8

COLLEGE ENTRANCE EXAMINATION BOARD SCHOLASTIC APTITUDE TEST - MATHEMATICS SCORES

		300 - 349 %	350 - 399 %	400 - 499 %	450 - 499 %	500 - 549 %	550 - 599 %	600 - 649 %	650 - 699 %	700 - 749 %	750 - 799 %	df = 7
Male:	Dropout (252)	---	.8	2.8	6.4	13.2	19.6	24.4	16.8	13.2	3.6	$x^2 = 16.940^{**}$
	Stayin (321)	---	--	2.1	3.9	12.7	14.6	21.8	21.8	17.0	5.6	
Female:	Dropout (297)	1.9	4.6	12.1	14.6	22.7	16.2	13.5	10.5	3.6	.3	$x^2 = 29.416^{****}$
	Stayin (377)	1.6	1.2	6.8	14.8	17.3	19.6	18.0	12.5	7.5	1.1	

TABLE 8
(Continued)
COLLEGE ENTRANCE EXAMINATION BOARD SCHOLASTIC
APTITUDE TEST - VERBAL SCORES

		300 - 349 %	350 - 399 %	400 - 449 %	450 - 499 %	500 - 549 %	550 - 599 %	600 - 649 %	650 - 699 %	700 - 749 %	750 - 799 %	df = 7
Male:	Dropout (252)	.4	3.6	9.6	15.6	18.4	18.4	18.4	10.0	6.0	.4	$x^2 = 11.403$
	Stayin (321)	--	1.2	4.9	14.3	18.4	20.2	19.9	12.8	7.1	.9	
Female:	Dropout (297)	1.6	4.3	9.3	21.2	19.6	17.8	13.2	9.2	2.9	.6	$x^2 = 44.121^{****}$
	Stayin (367)	---	2.9	5.9	8.8	17.7	24.7	19.6	14.1	5.9	.6	

Table 9 - Omnibus Personality Inventory Scores

	Religious Liberalism		Estheticism		Complexity		Impulse Expression		Social Maturity		Theoretical Orientation		Thinking Introversion	
	D	S	D	S	D	S	D	S	D	S	D	S	D	S
						MALE								
Low	24.9	15.4	30.0	30.0	14.9	13.6	21.8	28.0	5.3	3.0	8.9	8.3	6.3	5.1
Medium	56.3	58.0	55.6	54.5	61.9	66.1	59.2	53.7	60.3	55.6	50.2	53.8	65.7	67.7
High	18.6	26.8	14.0	15.6	23.2	20.3	19.1	18.5	34.5	41.6	41.3	38.1	28.0	27.4
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
df = 2	x^2=11.486		x^2=.106		x^2=1.227		x^2=4.327		x^2=4.801		x^2=1.011		x^2=.566	
	p <.01		p N/S		p N/S		p N/S		p <.10		p N/S		p N/S	
	N = 257 Dropouts 340 Stayins													
						FEMALE								
Low	27.1	29.8	16.2	9.8	21.7	20.2	49.3	52.1	9.9	5.3	20.7	14.6	6.0	2.7
Medium	57.1	54.6	58.0	57.0	61.0	62.3	42.4	44.7	61.1	60.3	59.9	64.5	61.3	60.5
High	15.5	15.6	25.7	33.5	17.2	17.8	7.4	3.3	27.6	34.5	19.1	23.8	32.4	37.0
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
df - 2	x^2=.840		x^2=9.806		x^2=.091		x^2=3.210		x^2=4.961		x^2=6.036		x^2=5.646	
	p N/S		p <.01		p N/S		p N/S		p <.10		p <.05		p <.10	
	N = 308 Dropouts 390 Stayins													

REFERENCES

Astin, Alexander W., "Personal and Environmental Factors Associated with College Drop-outs Among High Aptitude Students." Journal of Educational Psychology, 1964, 4, 219-227.

Bachman, Jerald G., et. al., Youth in Transition, Ann Arbor, Michigan: Institute for Social Research, 1967.

Coleman, J.S., et. al., Equality of Educational Opportunity. Washington, D. C. : U. S. Governmental Printing Office, 1966.

Cope, Robert G. Differential Characteristics of Entering Freshmen, Environmental Presses and Attrition at A Liberal Arts College. Unpublished Doctoral Dissertation, University of Michigan, 1967.

Cope, Robert G. "The Limitations of Attrition Rates and the Reasons for Dropping Out of College as Sources of Useful Information." Journal of College Student Personnel, November , 1968.

Flanagan, J. C., et. al. Studies of the American High School,Cooperative Research Project No. 226. U. S. Office of Education, 1962.

Goldsen, Rose K., et. al., What College Students Think. Princeton, N. J.: Norstrand, 1960.

Hessel, W. A Study of the Relationship of the Omnibus Personality Inventory and College Performance. Unpublished Manuscript, University of California, Berkeley: Center for the Study of Higher Education,ca. 1964.

Keniston, Kenneth and Helmreich, Robert, "An Exploratory Study of Discontent and Potential Drop-outs at Yale." (mimeo).

Nasatir, David, "A Contextual Analysis of Academic Failure." School Review, 1963, 71 (3), 290-298.

Omnibus Personality Inventory: Research Manual. Berkeley, California: Center for the Study of Higher Education, University of California, 1962.

Pace, C. Robert. The Influence of Academic and Student Subcultures in College and University Environments. Cooperative Research Project No. 1083, U. S. Office of Education, 1964.

Panos, Robert J., and Astin, Alexander W., "Attrition Among College Students." American Educational Research Journal, 1968, 5, Jan., 57-72.

Pervin, Lawrence A. "A New Look at College Drop-outs." University: A Princeton Quarterly, 1965, Winter, 1964-65.

Pervin, Lawrence A., and Rubin, Donald B.,"Student Dissatisfaction with College Dropout: A Transactional Approach." Journal of Social Psychology, 1967, 72 (2), 285-295.

Stern, G. G., Stein, M. L., and Bloom, B. S., Methods in Personality Assessment. Glencoe, Ill.: Free Press, 1956.

REFERENCES

Stern, G. G., Studies of College Environments. Cooperative Research Project No. 378. U. S. Office of Education, 1966.

Sucyek, Robert F., and Alfert, Elizabeth, "Personality Characteristics of College Dropouts." (Unpublished Final report).

Thistlethwaite, Donald L., Recruitment and Retention of Talented College Students. Cooperative Research Project, U. S. Office of Education, January, 1963.

Tillery, H. D. Differential Characteristics of Entering Freshmen at the University of California and Their Peers at California Junior Colleges. Unpublished Doctoral Dissertation, University of California, Berkeley, 1964.

Trent, J. W., Athey, I. J., and Craise, Judith L. "Technology, Education, and Human Development." Educational Record, 1965, 46, 93-103.